

IN THE CLAIMS:

1. (Currently Amended) An improved code compression method for compressing code, **characterized** in that the method comprises a model creation phase ~~which has a phase of~~ comprising a plurality of sub-phases, each sub-phase comprising a treatment of model comprising growing a sub tree into a tree of said model and a phase of pruning said sub tree.
2. (Original) An improved code compression method according to claim 1, wherein the method comprises additionally another phase for treatment of code, according to said model.
3. (Original) An improved code compression method according to claim 1, wherein a first stopping criterion and a second stopping criterion are determined for defining when stopping the growing and/or the pruning.
4. (Original) An improved code compression method according to claim 1, wherein said sub tree growing and said sub tree pruning are performed dependently on each other for optimizing a total cost of the treatment of model.
5. (Original) An improved code compression method according to claim 4, wherein the method comprises a training phase for optimizing the treatment of model according to an optimization criterion.
6. (Original) An improved code compression method according to claim 5, wherein a cost is estimated against a cost function arranged to be available for estimating whether or not to have treatment of model on said at least one sub tree.
7. (Original) An improved code compression method according to claim 5, wherein test data is used as an impulse for a treatment of model and the cost, as a cost for treatment of model, is evaluated as a response to the treatment of model as measured against an optimization criteria for said treatment of model.
8. (Original) An improved code compression method according to claim 7, wherein test data is arranged to comprise sets of test data as to form an ensemble of impulses for a treatment of model evaluation against an optimization criteria.
9. (Original) An improved code compression method according to claim 8, wherein the method has a phase in which test data of the pruning phase is varied as

based on the cost from growing a node and/or the test data of the growing phase is varied as based on the pruning cost.

10. (Original) An improved code compression method according to claim 1, wherein test data is used for treatment of model optimization, said test data comprising a standard part of code.

11. (Original) An improved code compression method according to claim 10, wherein said test data has pre-determined tolerances to yield an estimate on the cost in a process comprising a step of having treatment of model on a sub tree.

12. (Original) An improved code compression method according to claim 11 wherein the tolerances are determined iteratively.

13. (Original) An improved code compression method according to claim 1, wherein bijectivity for the treatment of model and/or treatment of code is controlled.

14. (Original) An improved code compression method according to claim 1, wherein the method is applied recursively to a sub tree.

15. (Original) An improved code compression method according to claim 1, wherein pre-extracted information is stored for a treatment of model comprising a sub tree.

16. (Original) An improved code compression method according to claim 1, wherein the growing and/or pruning phases are each optimized, for a code to be communicated in a communications network, for such a network that is comprising at least two network elements operable in the communication duties between said network elements.

17. (Original) An improved code compression method according to claim 1, wherein the growing and/or pruning phases are each optimized for storing said code.

18. (Currently Amended) A system for code compression, **characterized** in that it comprises an encoder ~~further~~ comprising means for growing a sub tree in a sub-

phase of growing a tree, means for pruning a said sub tree and cost evaluation means arranged to control both the growing ~~and/or~~ and pruning a of said sub tree.

19. (Original) A system according to claim 18, wherein said means are implemented at least partly by a computer program product.

20. (Original) A system according to claim 18, wherein said means comprise a hardware implementation for a part of said means.

21. (Original) A computer program product, **characterized** in that it is in a machine-readable form for executing a method according to claim 1.

22. (Original) A computer program product, **characterized** in that it is in a machine-readable form for implementing a system according to claim 18.

23. (Currently Amended) A network element of a communication system comprising at least two net work elements and a network there between, for communicating coded code over a boundary layer between said network element and a second network element of the network, **characterized** in that said network element comprises encoder means ~~further~~ comprising means for growing a sub tree in a sub-phase of growing a tree, means for pruning a said sub tree and cost evaluation means arranged to control both the growing ~~and/or~~ and pruning a of said sub tree.

24. (Original) A network element of a communication system according to claim 23 wherein the net work element comprise a base station.

25. (Original) A network element of a communication system according to claim 23 wherein the net work element is a mobile terminal.

26. (Original) A network element of a communication system according to claim 23 wherein the network element further comprises decoder means for decoding a code encoded by the encoder of claim 23.

27. (New) An improved code compression method for compressing code, characterized in that the method comprises a model creation phase which has a phase of treatment of model comprising growing a sub tree into a tree of said

model and a phase of pruning said sub tree, wherein said sub tree growing and said sub tree pruning are performed dependently on each other for optimizing a total cost of the treatment of model according to an optimization criterion, so that the cost is estimated against a cost function arranged to be available for estimating whether or not to have treatment of model on said at least one sub tree.